

### Abstract

A power system causes no variation in output voltage during switching from a linear regulator to a DC-DC converter. The power system switches off a drive circuit of a DC-DC converter and supplies voltage to a load from a linear regulator if the load is light, while the power system halts voltage supply to the load from the linear regulator and switches the drive circuit of the DC-DC converter on if the load is heavy. During a set period of time after the load changes from light to heavy, the linear regulator continues to supply voltage to the load while the DC-DC converter supplies a pseudo feedback signal to a control circuit in place of a feedback signal, with the drive circuit left off to control the time ratio at switching elements and, thus minimizing output voltage variations.